Speaker 1:

Welcome to the Michigan Minds Podcast, a quick and informative analysis of today's top issues from University of Michigan faculty.

Speaker 2:

Thank you so much for joining Michigan Minds today. I'm really looking forward to this conversation, and so I want to jump right in. But first, can you introduce yourself and share a little bit about your role at the University of Michigan?

Vyta Pivo:

It's a pleasure to be here and chat with you today about my research. My name is Vyta Pivo, and I'm a post-doctoral scholar with the Michigan Society of Fellows, which is this interdisciplinary community and a post-doctoral fellowship. So junior and senior fellows from across the university from different disciplines get to work together and share their research and kind of bounce ideas off of each other. So that's been a really nice community to be a part of. And then I'm also an assistant professor of architecture in the Taubman College of Architecture and Urban Planning, where I teach history courses that have a kind of theoretical political spin. So they kind of deal with infrastructure and power with materials and manufacturing as well as these kind of intersecting histories of architecture and capitalism.

Speaker 2:

Fascinating. Can you tell us a little bit more about your areas of interest and the areas in which your research focuses?

Vyta Pivo:

Sure. Yeah. So my background is in architectural design, and then I did a stint in an architectural firm and realized this is not what I wanted to do. And I was really interested in kind of broader questions than thinking about the way that architecture is a kind of opportunity to have these bigger social political conversations. And that architecture is a kind of language through which we have these conversations.

So I did my PhD in American studies where I specialized in architectural and urban history, but also science and technology studies and history of capitalism. My goal is to kind of really rethink how we think about architecture, that it's not just a building, it's not just an urban issue. It's not just a construction site. And so my goal is to kind of expand the purview of architecture and the lens that we have for studying architecture from just the building and the site to include also the manufacturing of construction materials, the construction process itself, but also where the demolished buildings go. So where does the debris go? And so through my work, by expanding this lens, I really show that architectural production is not just an issue of design. It's really an issue of kind of slavery, of colonialism, of climate change. So architectural production intersects with all of these really interesting, important histories in a very critical way, but we haven't really unpacked that as much in the field because we focus so much on designers.

Speaker 2:

Wow, that is so interesting. So there's a current project that you have called a World Cast in Concrete:How the US Built Its Empire. Can you talk a little bit about that?

Vyta Pivo:

Sure. Yeah. So A World Cast in Concrete:How the US Built Its Empire is my first book project, and it comes from my dissertation research that really thinks about concrete, not just as an aesthetic material or even an architectural material, but really a material of empire. And so I basically track the birth of the industry and the US in the Lehigh Valley of Pennsylvania. And then I look at its expansion into the US South, imperialism in the global south, and then this kind of neocolonialism in outer space. So it's sort of a big scale project, but it really thinks about the transformation of this material in different geographical contexts and across history and time. And it thinks about agency in a really different way. So I don't just look at architects or builders, I really look at cement plants and I look at quarries and I look at kind of all different types of bodies that engaged in manufacturing this material.

And so the argument is that these particular forms of manufacture changed local labor conditions across the world. So it's not just kind of designed that changes the local landscape, it's also how we make things. And so my argument is that the US basically exported this form of manufacturer to shade building cultures across the world. And that process has had really severe consequences both for kind of labor but also for climate change. So cement is the second most consumed material on earth after water, and it produces more CO2 than the trucking industry or the aviation industry, which is really quite surprising.

And so the journal Nature came out with this statistic recently that basically now anthropogenic mass, which is mass produced by humans now exceeds all biomass on earth and concrete is a huge chunk of that human produced mass. So it's really critical to understand how our addiction to this material is not just an issue of cost or even technology is really, it's a cultural issue and it's a political issue. So my project really traces this kind of deeper root, this kind of deeper commitment to this material beyond aesthetics and beyond kind of appearances.

Speaker 2:

And you recently joined the Conversations Podcast to talk about the ways in which architects are using traditional architectural designs as opposed to modern styles to keep buildings cool as places around the world continue to experience extreme heat. So can you explain some of those different methods or materials that are being used that are better suited to keep buildings cool?

Vyta Pivo:

Yeah, so that podcast was a really neat kind of global conversation about construction practices and politics of construction and the way in which I think we generally kind of feel like things are improving, we're making progress, we're doing things better. But in many ways, the way that we build is not determined necessarily by the best methods, but really kind of by politics. So what I talk about in the podcasts is the way that the concrete industry has become a kind of monopoly and has really pushed this material into different zoning codes and other kind of legal infrastructures that define how and what gets built and where. So it's not so much that concrete is the best material, it's really kind of the easiest material, and it's sort of almost the mandatory material to work with in many cases.

And so because concrete has in some ways has been shoved down our throats and we kind of have to use it, we've failed to really engage with a lot of different material alternatives and alternative possibilities. And a lot of vernacular architecture or sort of architecture that is more traditional and community based and less kind of design architect capital A based, there's a lot of wisdom and a lot of knowledge in terms of how to work in specific climates with specific materials, with specific kind of construction technologies and practices. And a lot of those histories have been lost because of this kind of dominance of industry, of kind of big, big manufacturing industry.

So some of the architects talked about sort of just design techniques so you can integrate the building into the existing landscape, so using kind of vegetation to provide shade, using natural materials that absorb heat better. So I'm a big fan of kind of compressed brick and compressed dirt as a way to do it. One of the architects was talking about installing these vertical wells that essentially allow cool air to come into the building without having to rely on air conditioning or other kind of mechanical sort of systems that we are so used to in the West. And that's part of, that's a really different way of thinking about architecture as not being something that is isolated and self-contained, but as something that is part of a landscape on many levels. So part of a cultural landscape, part of a labor landscape, part of an environmental landscape.

And so I think it's really crucial to make that transition in order to make buildings sustainable and really to recognize that a building is part of our bodies in some ways. A building is part of a block, a building is part of a neighborhood, a building is part of a city, of an entire region. So the more we can break down these barriers, I think the more we can improve how we build for a really rapidly changing and unpredictable climate.

Speaker 2:

And so really diving back into the conversation and the information that you were sharing about concrete specifically, have you seen a shift at all in the cultural meaning or in the use of concrete in architectural design?

Vyta Pivo:

I think for my research and study, I think there's a kind of intensification of existing ideas about concrete on the one hand and then a kind of expansion of other ideas about how concrete is made or how cement is made. So for example, when concrete emerged as a kind of key building material in the late 19th century, it was sort of marketed and advertised as a really unique scientific medium. So it wasn't the garbage brick or wood or stone that you quarry from the woods or from the land. Concrete was really a scientific material made in the laboratory and it was tested and it was sort of measured and it was predictable. And so that was kind of the spiel, but that wasn't really accurate. It was really more advertising. But this was an effort to really separate concrete from other types of materials and show that this is the medium of modernity.

So I think concrete has always been this kind of perpetually modern material without a history, but it does have a history. But I think oftentimes as we continue to use concrete and to talk about concrete, it continues to function as this kind of a material without a character. It sort of can perform like stone, but it can also look like plastic. There's all of these different iterations of concrete. So I think this kind of assumption that it continues to be a perpetually modern material without a history, without a location, it kind of can be anything, has continued to reinforce this idea that there is no history here. But actually like I explained in my project, it is a deeply historical material embedded and really kind of problematic trans planetary even histories. And it's important to understand that as we continue to rely on this medium, we continue to perpetuate some of these kind of existing issues in terms of labor, in terms of social justice, environmental justice.

I continue to see this sort of historical amnesia pop up today as much as it did historically. And I think part of it is because we don't understand how a lot of this idea about concrete being scientific, it was kind of propaganda. Something else that is interesting recently, again, kind of in some ways it's always been a global material, but I think people usually assume that concrete is very heavy. There's no way that this is a global material. It must be local, it must be kind of shipped in from the nearby location. But now much like with textiles, we are able to separate the industry on the global scale. So it's no longer as local of a medium as I think we imagine. So that's a really interesting kind of geographical dynamic too, where even though from the beginning cement manufacturers wanted to ship their material, they had all kinds of different challenges to deal with from packaging to literally how do you ship this medium across the world and why, if you can make it locally.

But now with labor regulations and environmental regulations, it in some cases makes sense to separate the manufacturing process into different stages. So for example, to make cement, you have to extract limestone and burn it at really high temperatures. And this burning process produces a lot of CO2, and that's kind of the harmful part of the cement manufacturing process. But there are ways to separate this chain so you could extract limestone in one place and burn it in another place, and then melt it in even another place. So there's now this very interesting global scale that totally changes who can make cement and where, and so you don't have to make it and use it in the same place. So the kind of geopolitical dynamics are really fascinating where you can essentially export pollution and move it to particular countries that don't have those same types of regulations that we do in some western countries. And so sort of who gets to use cement and who makes it now are kind of two different sides of the chain.

Speaker 2:

Thank you so much. I want to change course for a quick moment because you were recently named a University of Michigan Public Art and Engagement Fellow by the Arts Initiative. So congratulations.

Vyta Pivo:

Thank you.

Speaker 2:

And what was your reaction to finding out that you were one of the eight who were selected?

Vyta Pivo:

I was so thrilled. I think the initiative is absolutely amazing. The initiative brings together scholars from across campus, from different disciplines, and we basically engage with the monument lab out of Philadelphia to study public monuments and memorials, both in Michigan, but also on a national and global scales. And my work is always engaged with the public space. I've always been kind of public facing. It's important for me because literature on concrete is either scientific or kind of design-y. So I've always been bridging the two by reaching out to workers, interviewing cement manufacturers, really going and seeing how this process is completed. And so for my work to be legible, I really want the workers to understand what I'm talking about and to kind of see themselves in this history too. And so it's really nice to connect to other scholars on campus who have the same commitment to kind of communicating with the general public, but also a commitment to kind of rethinking everyday environments around us and really kind of digging deep and kind of uncovering the layers of stories that are just everywhere.

Speaker 2:

And with that, how will the fellowship help advance this work and help you engage with the public and with other experts, as you were saying, and what do you hope to gain from the experience?

Vyta Pivo:

So I applied for this fellowship in some ways for kind of biographical reasons, because I grew up in Lithuania surrounded by Soviet monuments. So it's sort of a different kind of connection to monumentality and memorialization. But at the same time, concrete, as I mentioned before, is a key material that's used in a lot of monuments and memorials. And part of it is because it can express all kinds of different emotions, and it can be stone, it can be wood, it can really represent different types of landscapes. And I'm just kind of curious about the sort of political economy of producing memorials. So where does this cement come from? So it's sort of my classic Vyta question, Where is this cement coming from? Who makes it? So I'm really curious about that, the sort of the politics, not just of the memorials, but of who actually makes it and what materials we use.

And then again, it's kind of this continuation of this sort of historical amnesia about concrete. So concrete is used to memorialize particular events, but concrete itself has a history. It itself has a politics. So how do those two come together? How do we think about them together, but also separately? And another big interest of mine is really thinking about, in my own research, I think about agency in a really broad way. So agency not of just of human workers or human manufacturers and human builders, but also non-human agency and sort of the role that animals or landscapes or even the concrete, the material itself has had on shaping history, on shaping how the material evolved over time.

In the case of this fellowship, I'm really curious about how do we think about memorials in the context of climate change? So I think now there's a lot of conversations about the rights of nature, the rights of oceans, and so how memorials have always been this kind of human based endeavor where we memorialize and commemorate particular human events or wars or some conflicts. But how do we think about memorialization in the context of the Anthropocene? How do we memorialize lost ice caps or just different species that are extinct now? So I think there's a lot of really interesting questions about sort of catching up to these broader conversations about agency that the study of public space, the study of public art could really productively engage with.

Speaker 2:

So before we wrap up, because unfortunately we are running out of time, I like to ask each expert who comes on Michigan Minds for one takeaway for the audience. If everyone were to remember one thing from the information that you've shared today, what would you want that to be?

Vyta Pivo:

I want your listeners and folks in general to understand and know and keep in mind that concrete has a history and it has a politics and it has a culture. And so every time you walk on a sidewalk or walk into a building that is built of concrete, ask, where did this cement come from? My classic question. I think it's really productive to think about materials in that way, that they're not abstract or they're not history less or story less, it's just a matter of putting them into focus as we think about our history and our kind of culture.

Speaker 2:

Thank you so much. Is there anything else that you want to share before we wrap up?

Vyta Pivo:

I don't think so. I think this was great. Yeah. Thank you so much for the opportunity and the chat and the great questions.

Speaker 2:

Absolutely. Thank you so much for giving us your time today. We really appreciate it.

Speaker 1:

Thank you for listening to the Michigan Minds Podcast, a production of the University of Michigan. Join the conversation on social media with #UMichimpact.